**CASE REPORT**

**Journal of Otorhinolaryngology and Facial Plastic Surgery 2023;9(1):1-5.**
https://doi.org/10.22037/orlfps.v9i1.43315

# Tonsillar Lymphangiomatous Polyps: A Rare Case Report

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## Article Info

**Article Note:**
Received: August 2023
Accepted: September 2023
Publish Online: September 2023

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**Keywords:**
Tonsil;
Tonsillar lymphangiomatous polyp (TLP);
Hamartomatous lesion.

## Abstract

**Background:** Tonsillar Lymphangiomatous Polyp (TLP) is a rare hamartomatous lesion composed of lymphangiectasia fibro-lipomatous elements. Its stromal framework includes adipose tissue with dilated lymphatic ducts and lymphoid tissue. Despite its rarity, TLP can be challenging to classify due to its unique clinical and pathological characteristics. In this context, we present a comprehensive examination of a TLP patient and documented TLP cases.

**Case presentation:** A 27-year-old man was referred to the Kurdistan Otolaryngology Clinic due to persistent snoring, difficulty swallowing, and a foreign body sensation in his throat. A pedunculated mass was found on the superior pole of the right tonsil. He underwent a bilateral tonsillectomy, and the pathological examination revealed lymphangiomatous polyps. The patient had no postoperative bleeding and showed no recurrence after a year.

**Discussion:** The head and neck region is the most common area for lymphatic lesions, particularly lymphangiomas. While tonsillar lymphangiomatous tumors are rare, identifying them in this area can be challenging. Tonsillar lymphangiomatous polyps are benign tumors that can sometimes be misdiagnosed as malignant neoplasms. Common clinical presentations of lymphangiomatous polyps included dysphagia, dyspnea, and a sensation of having a foreign body in the throat. Surgical removal through tonsillectomy is the established treatment approach, with no documented instances of post-surgery recurrence.

**Conclusion:** We studied a Tonsillar Lymphangiomatous Polyp (TLP) case and provided a comprehensive understanding of its clinical, histopathological, and immunohistochemical attributes. Accurate diagnosis requires histological evaluation, and the recommended treatment involves complete removal of the tonsils.

**Conflicts of Interest:** The Authors declare no conflicts of interest.
**Please cite this article as:** Ahmadi A, Zobairy H, Sanaei A, Dadkhah S, Salem MM, Davoodi F, Mosleh H, Naseri R. Tonsillar Lymphangiomatous Polyps: A Rare Case Report. J Otorhinolaryngol Facial Plast Surg 2023;9(1):1-5. https://doi.org/10.22037/orlfps.v9i1.43315

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## Introduction

Tonsillar lymphangiomatous polyp (TLP) represents a distinctive hamartomatous lesion characterized by its composition of lymphangiectasia fibro-lipomatous elements. This polyp has been referred to by various names including lymphangioma fibro-lipomatous polyp, tonsillar lymphangioma, and hamartomatous tonsillar polyp. The stromal framework of TLP is composed of collagen tissue with varying densities and includes adipose tissue alongside dilated lymphatic ducts and diverse components of lymphoid tissue. The exterior surface of the TLP is coated with squamous epithelium (1-3). TLP emerges from a stem structure that attaches to the tonsil and becomes evident at the pharyngeal opening (oropharynx). In terms of occurrence, TLP is an infrequent manifestation in the form of a polypoid mass. Despite its rarity, the condition poses challenges in terms of accurate classification due to its distinctive clinical and pathological attributes, thereby necessitating careful scrutiny by both pathologists and medical practitioners (4-6).

## Case presentation

A 27-year-old man was referred to the Kurdistan Otolaryngology Clinic due to a recent onset of snoring that had persisted for 5 months. Subsequently, his symptoms progressed, and after 4 months, he began experiencing difficulty in swallowing and a foreign body sensation in his throat. During the physical examination, a pedunculated mass measuring 3 cm was identified, attached to the superior pole of the right tonsil, while the left side exhibited normal characteristics. Both the nasopharynx and oropharynx appeared normal as well (Figure 1). The patient was scheduled for a bilateral tonsillectomy. Pathological evaluation revealed reactive follicular hyperplasia on the left side, with evidence of actinomycete colonies.

On the right side, a section of the mass demonstrated a smooth and uniformly tan cut surface. The remaining tonsil displayed a uniform cut surface (Figure 2).

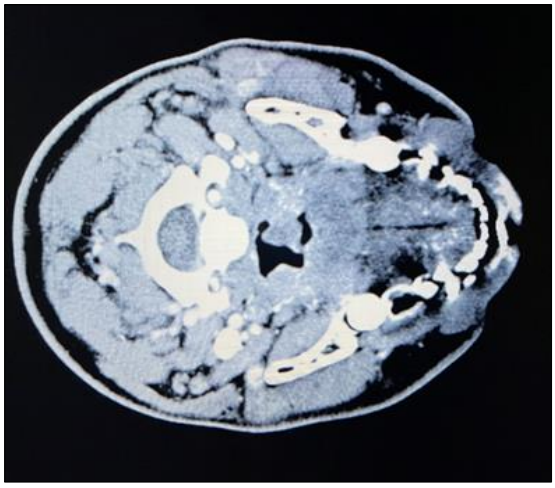

**Figure 1.** CT Scan with IV contrast, Axial view, Pedunculated soft tissue mass with smooth border originating from right palatine tonsil. In post-contrast arterial phase demonstrates heterogeneous enhancement slightly less than normal enhancing tonsil.

Microscopic analysis disclosed a polypoid protrusion on the tonsillar surface, characterised by the presence of proliferating submucosal dilated lymphatic channels with moderate fibrosis tissue. The vascular channels exhibited thin walls lined by flat endothelium and were filled with protein fluid and small lymphocytes.

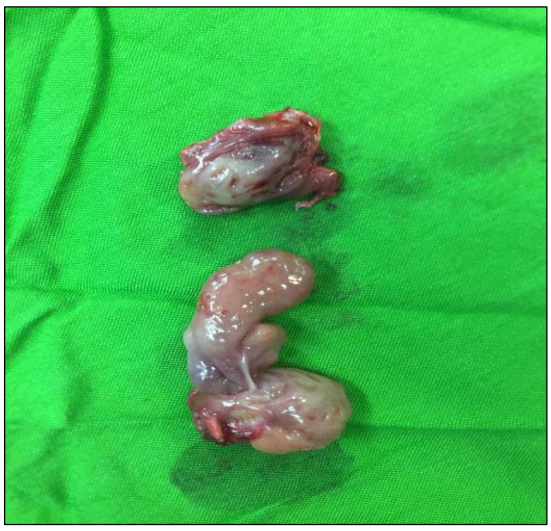

**Figure 2.** The left side with reactive follicular hyperplasia. On the right side 2.6*2.1*1.1 tonsil with a cribriform outer surface, there is a pedunculated polypoid relatively soft mass, measuring 3.2*1.7*0.9 cm.

Journal of Otorhinolaryngology and Facial Plastic Surgery 2023;9(1):1-5.
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The overlying squamous epithelium exhibited moderate acanthosis, spongiosis, and mild lymphocytic epitheliotropism, consistent with lymphangiomatous polyps (Figure 3). A follow-up one year after the surgery indicated no signs of recurrence.

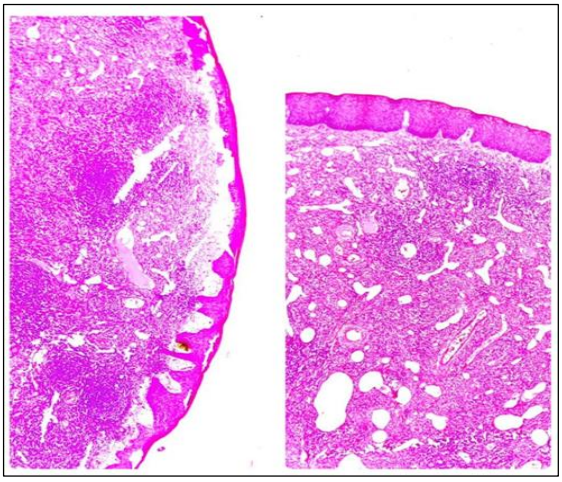

**Figure 3.** Pathology view, the overlying squamous epithelium showed moderate acanthosis, spongiosis, and mild lymphocytic epitheliotropism which was lymphangiomatous polyps.

**Overview of Previous Studies**

We thoroughly reviewed relevant literature on tonsillar lymphangiomatous polyps using reputable databases such as Google Scholar, Cochrane Library, Science Direct, Embase, and PubMed. After a meticulous screening process, two authors approved 14 articles listed in Table 1.

TLP patients commonly complain of dysphagia, sore throat, and swallowing difficulties. Most were males, and some reported symptoms resembling tonsillitis. Therapeutic intervention usually involves GA followed by tonsillectomy procedures. Regarding pathological observations, the results from the present study revealed a notably elevated prevalence of lymphangioma and hamartoma components, surpassing the corresponding findings reported in the comparison studies.

Certain studies provided size information, with the largest dimensions presented in centimetres.

**Table 1.** Tonsillar lymphangiomatous polyps in previsions studies

| Num | Author | Year | Age | Sex | Cases | symptom | Treatment | Pathology | Ref |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Goris et al. | 1910 | nr | Male | 1 | Dysphagia and dyspnea | | Cavernous lymphangioma | 7 |
| 2 | Menzel et al. | 1919 | nr | NR | 1 | Acute tonsillitis | | Lymphangioma | 8 |
| 3 | Harrison et al. | 1960 | 27 | Female | 1 | Sore throat, ‘spitting blood | | Lymphangioma | 9 |
| 4 | Ash et al. | 1962 | 20 | Male | | Frequent sore throat | | Hamartoma | 10 |
| 5 | Visvanathan et al | 1971 | 31 | Male | | Dysphagia for solids, sore throat | | Pedunculated lymphangioma | 11 |
| 6 | Araujo et al. | 1977 | 18 | Male | | Acute tonsillitis, mass | | Lymphangioma | 12 |
| 7 | Samarrae et al. | 1985 | | - | 2 | Sore throat, mass | | | 13 |
| 9 | Roth et al. | 1996 | 14 | Male | | Recurrent tonsillitis, mass | | Lymphangiomatous polyp | 5 |
| 10 | Kardon et al. | 2000 | mean, 25.2 | 13 m) 13 f | 26 | dysphagia, sore throat, and the sensation of a mass in the throat | | 0.5 to 3.8 cm (mean, 1.6 cm) | 4 |
| 11 | Chen et al. | 2010 | Pediatric | | | | | | 14 |
| 12 | Khatib et al. | 2015 | 14 | Male | 1 | Dysphagia and dysarthria. | GA | Lymphangiomatous Polyp | 15 |
| 13 | Iliadou et al. | 2016 | 9 | Male | 1 | foreign body feeling in the throat | GA | 1.8 × 1.2 × 1.2 cm lymphangioma | 2 |
| 14 | Gan et al. | 2019 | 21 | Male | 1 | foreign body sensation and an intermittently sore throat | GA | lymphangiomatous polyps 4.0 cm × 2.0 cm × 1.5 cm | 16 |

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## Discussion

The head and neck region represent the most prevalent anatomical sites for lymphatic lesions, constituting the primary location for lymphangioma cases. These lesions are predominantly observed in the skin and subcutaneous tissues, although they can manifest in diverse areas such as the larynx, parotid gland, oral cavity, and tongue. While lymphangiomatous tumors are infrequently encountered in the tonsillar region, the designation of these lesions within this area can be perplexing. In the early 20th century, when these lesions were first identified, various terminologies including angioma and angiofibromatous angioma were employed to describe similar tonsillar tissue lesions. These lesions have also been categorized based on stromal components, with alternate designations such as fibro-lipomatosis or a more descriptive nomenclature like "polypoid tumor containing fibro-adipose tissue" (1-5).

Tonsillar lymphangiomatous polyps represent intriguing benign lesions that, in certain clinical contexts, may lead to misdiagnoses as malignant neoplasms (1). Notably, Kardon et al. conducted a study with a substantial number of TLP cases (n=26) in 2000 (4). These cases predominantly involved adults (6,17), with a smaller subset affecting children (14, 18). This variability in terms underscores the diagnostic complexity surrounding this condition (4).

The study by Kardon et al. indicated a mean patient age of 25 years (range: 3 to 3) without accounting for gender differences (4). Clinical presentations of lymphangiomatous polyps commonly included dysphagia, dyspnea, and a foreign body sensation (4, 19). Importantly, in concordance with prior studies, no reports of malignancy changes have emerged to date. This study also reported no instances of malignancy or recurrence among the patients.

Differential diagnoses encompass juvenile angiofibroma, squamous papilloma, and lymphangioma (4, 20). Juvenile angiofibroma often presents with recurrent epistaxis, predominantly in male adolescents. These tumors, though benign, exhibit local invasiveness and pronounced vascularity. Histologically, juvenile angiofibroma displays dense fibrovascular connective tissue with thin-walled vessels resembling stag horn flowers (4).

Contrarily, tonsillar lymphoid polyps consist of a complex interplay of firm and soft stroma alongside lymphocytic components. Squamous papilloma is characterized by the presence of thickened and squamous epithelial multilayering, devoid of lymphatic and lymphocytic elements (4, 21). On the whole, lymphangiomas feature prominently dilated vascular lymphatic ducts, with fewer protein veins and stroma compared to lymphangiomatous polyps (4, 5). Surgical removal through tonsillectomy is the established treatment approach, with no documented instances of post-surgery recurrence (4).

## Conclusion

In this study, we have provided a comprehensive insight into the clinical, histopathological, and immunohistochemical attributes of a case involving tonsillar lymphangiomatous polyp (TLP). Moreover, we have undertaken an extensive review of the clinical and laboratory findings associated with this condition. The diagnosis of this ailment mandates meticulous histological evaluation, and the therapeutic approach entails complete tonsil removal.

## Acknowledgments

We would like to thank anyone who contributed to this study.

## Conflicts of Interest

The authors declare no conflicts of interest.

## Financial Support

The authors declare there is no funding support for this study.

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https://doi.org/10.22037/orlfps.v9i1.43315

## Patient's Perspective

Written consent was obtained from the patient. The whole process of examination and the purpose of the article was thoroughly explained.

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